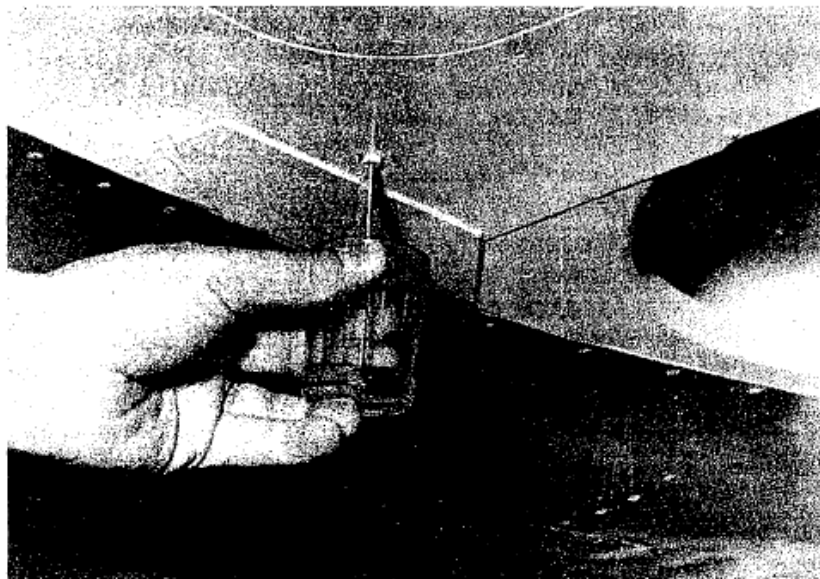


When the push-type starter switch is activated in the "start" position, the starter vibrator sends an interrupted current through the retard-breaker points while the right magneto is grounded out. The left magneto then provides a shower of sparks to each cylinder after the piston has reached top dead center on the compression stroke. The engine starts sooner and easier because of this system.

FUEL SYSTEM

Fuel is contained in two integral sealed sections in the front part of each wing root. Each cell will hold 26 gallons of gasoline (100/130 octane). These fuel cells each have a sump drain under the wing from which fuel may be sampled to check for water or sediment contamination. A small plastic cup with an actuator prong is provided to obtain fuel samples. If water is present in the fuel, a distinct line separating the water from the gasoline may be seen through the plastic cup. Water, being heavier, will be on the bottom of the cup, and the light green colored fuel will be on top.

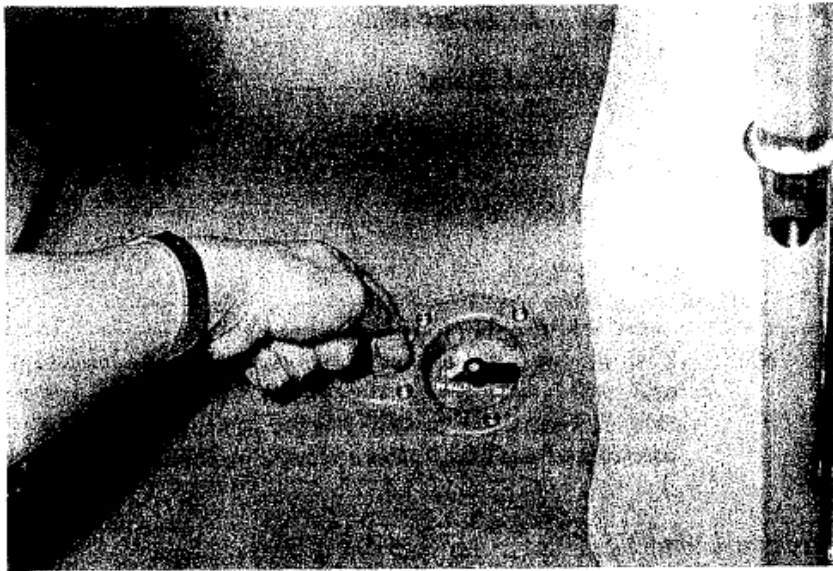
FIGURE 2 **SAMPLING FUEL FROM MAIN TANKS**



Aluminum fuel lines feed the fuel from the tank to a two-way, positive-setting selector valve on the floor ahead of the pilot's seat. The selector valve feeds fuel from one of the tanks at a time, and also has an "off" position for extended periods of storage or for emergency use. The selector valve also contains a sump drain which is actuated by pulling the ring adjacent to the fuel valve handle. Switch the selector valve handle to the right and left tanks to drain the respective lines. Be sure sump drain returns to normal closed position after releasing the ring. Fuel is fed from the selector valve through the electric boost pump, then to the engine driven pump and into the fuel injector unit. The electric boost pump is turned on for take-off and landing to provide fuel pressure if the engine driven pump malfunctions.

FIGURE 3

SELECTOR DRAIN VALVE



PART II

FLIGHT PROCEDURES

GENERAL

This section will describe recommended flight procedures necessary for the proper operation of your Super 21. The aircraft is normally flown from the left seat. However, when equipped with optional dual brakes, a copilot or instructor has full control of the aircraft and access to all instruments and controls. The copilot can override the Mooney PC system easily without depressing the cut-off valve located on the left control wheel.

WEIGHT AND BALANCE

The aircraft weight and center of gravity location can be determined from the information and examples shown in the weight and balance data provided with the airplane. Refer to the latest FAA Form 337 for the corrected weight data if the airplane has been altered since leaving the factory.

The maximum allowable take-off weight of the Super 21, including fuel, oil, baggage, and passengers is 2575 pounds. If there is doubt concerning the weight or C.G. location of a proposed loading, that loading should be checked per the weight and balance data. For example, a loading consisting of full fuel, 120 pounds baggage (maximum allowable), pilot, and two rear passengers could result in a C.G. location exceeding the rearward limit. Moving a rear passenger to the right front seat would eliminate this condition.

The hat rack area aft of the main baggage compartment is intended for light objects.

WARNING: This area is limited to ten pounds weight for balance purposes.

PRE-FLIGHT INSPECTION

The following pre-flight inspection is recommended:

1. Check all switches off.
2. Remove tiedowns or wheel blocks, check tires and prop clear of rocks, holes, etc.
3. Check wings and control surfaces clear of ice, snow, or frost.
4. Check the propeller blades for nicks or cracks.
5. Check the oil level to six quarts or above.
6. Inspect the cowling for loose attachments.
7. Inspect the tires for proper inflation.
8. Inspect the air filters for cleanliness.
9. Check the left tank for fuel level and drain sump.
10. Check the left aileron for freedom of travel.
11. Inspect the left flap.
12. Inspect the elevator and rudder for freedom of travel. (Rudder travel will be limited by nose gear steering mechanism.)
13. Inspect the right flap.
14. Inspect the right aileron for freedom of travel.
15. Check the right fuel tank for fuel level and drain sump.
16. Check lights if flight is at night.

ENTERING THE AIRPLANE

After entering the cabin, close the door by pulling on the pull strap and rotating the handle forward to the latched position. DO NOT SLAM THE DOOR. Check that the gear retraction handle (or electric gear switch) is in the gear down and locked position. Drain the fuel selector valve on the floorboard and turn the selector to the proper tank. Be sure the drain returns to "OFF" position and that the pull ring is properly positioned in the cavity provided. If the flight is at night, check to assure a flashlight is on board.

STARTING THE ENGINE

The following starting procedures are recommended; however, the starting characteristics of each engine may vary slightly